



## **Operating Manual**

**For**

***TigWeld***<sup>TM</sup>

**TigWeld 200EX**

**200 AMP AC/DC Pulse TIG Welder and  
AC/DC Stick Welder**



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## **THANK YOU!**

We, at LONGEVITY, want to thank you for purchasing our product. You are almost ready to experience Longevity Welding first hand. Longevity definitely appreciates your business and understand that this equipment may be overwhelming to setup and operate so we have prepared a manual that will assist you in understand your new plasma cutter/welder. If you have any questions during or after reading this manual, please feel to contact us! Please take a moment to register your product on our website at [www.longevity-inc.com](http://www.longevity-inc.com) or [www.lweld.com](http://www.lweld.com)

Once again, thank you for choosing Longevity as your main welding supplier!

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Please join our welding forums to share welding tips and tricks, to receive useful information from customers who also use our products, and to be a part of the Longevity™ welding community at [www.freeweldingforum.com](http://www.freeweldingforum.com)



Check out LONGEVITY Racing at [www.longevity-racing.com](http://www.longevity-racing.com)



## **Warranty**

LONGEVITY Plasma Cutters, Welders, and Multi-Purpose Welders are covered for specific Parts and Labor warranty at our facility. For detailed information regarding your specific LONGEVITY welder or cutter, please view our Terms and Policies page on our website at the following website link:  
<http://www.longevity-inc.com/terms/>.

## **Shipping Damage**

Your machine is insured against damage during shipping. Keep all packing materials and containers in case machine must be returned. We will initiate a claim with the shipping company to cover damage or loss. If there is shipping damage upon opening your package, our customer service team will work with you to get the matter resolved.



## **In Warranty Service**

Customers, who own machines that are in warranty and require service, should contact our Warranty Department by email at [help@longevity-inc.com](mailto:help@longevity-inc.com) to obtain a return authorization code. In addition to the warranty we offer, we would like for you to register your product on our website at [www.longevity-inc.com/resources](http://www.longevity-inc.com/resources). Remember, warranty starts from the date of purchase. For your convenience, write your order information below so you can track your order in case you need warranty work.

Order No.: \_\_\_\_\_

Date of Purchase: \_\_\_\_\_

Warranty Period: \_\_\_\_\_

## **Out-of-Warranty Service**

Customers, who own machines that are out of warranty and require service, should contact us for an estimate. Longevity offers an exchange program on out of warranty units. We also help non LONGEVITY customers with repairs, replacement, and service.

If your unit is not manufactured by Longevity and you cannot receive service from your manufacturer or seller, Longevity will lend out hand. Our warranty policy is also available for all plasma cutters and welders. For more information, please email us at [help@longevity-inc.com](mailto:help@longevity-inc.com)

## Warnings and Safety

Welding and plasma cutting may be dangerous to the operator and to bystanders, if the equipment is not operated properly. Welding or cutting must be performed in accordance with all relevant safety regulations. Carefully read and understand this instruction manual before installing and operating this equipment.

### Changing function modes during welding may damage equipment.

Before welding, disconnect the electrode-holder cable from the equipment.

A circuit breaker is required to prevent electrical overload of the equipment.

Only high quality welding tools should be used.



### Electric Shock can be fatal.

Ensure that ground cable is connected in accordance with applicable safety codes.

Never touch electrodes, wires, or circuit components with bare hands. Wear dry welding gloves when welding.

The operator must be insulated from the work piece.



### Smoke and gas can be harmful to health.

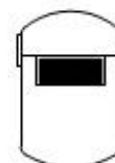
Ensure that the working area is well ventilated.

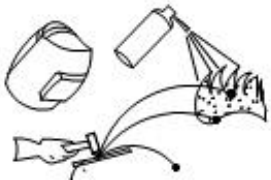

Avoid breathing smoke and gas generated during the welding process. Cutting and welding can cause cancer because of the smoke that comes from the welds and cuts.



### Arc-light emission can be harmful to eyes and skin.

Always wear a welding helmet, anti-radiation glass, and work clothes while welding.



<p>Ensure that people in or near the working area are protected.</p>	
<p><b>Welding splash is a fire hazard.</b></p> <p>Keep flammable material away from the work place.</p> <p>Keep a fire extinguisher nearby, and have all personnel trained in its use.</p> <p>Surface noise generated while welding or cutting can be harmful to hearing.</p>	
<p><b>In the event of a machine fault.</b></p> <p>Refer to this instruction manual.</p> <p>If the fault cannot be determined, contact your local dealer or supplier for assistance.</p>	



## Safety Tips

Consider the following tips to ensure safe operation of your welding/cutting equipment:

- Ensure that this welding equipment is installed in an area free of corrosive chemical gases, flammable gases or materials, and explosive chemicals.
- The area should contain little dust, and have a humidity of no more than 80%.
- Operate the welding equipment in an area sheltered from direct sunlight and precipitation. Work area temperature should be maintained at -10°C to +40°C;
- If, because of an overload, the machine suddenly stops, and it is necessary to restart it, leave the internal fan operating to lower the inside temperature.
- Always wear protective clothing and a welding mask to protect your skin.
- Wear safety goggles designed to darken the arc generated by your machine.
- Wear suitable noise protection to protect your hearing.
- Ensure that machine is grounded through the power cord or on the machine case.
- Never operate the machine in bare feet or on a wet floor.
- Never switch the machine off while it's in use. Doing so will damage the internal circuitry.
- Ensure that your circuit breaker is rated to handle the current requirements of your machine.
- Use a UL approved receptacles and plugs with your machine. Never hard wire the machine to main power.
- Work in a well-ventilated area to avoid smoke. Keep your head out of the smoke. Ensure that air is flowing away from you to avoid inhaling smoke.
- Ensure proper ventilation through the machine's louvers. Maintain a distance of at least 12 inches between this cutting equipment and any other objects in the work area.
- Use a screen or curtain designed to keep passer byes from viewing the arc.
- The arc spray and metal spray from machine use may cause nearby fires. Use caution.



- If, after reviewing this manual, you have any problems in setting up or operating your machine, contact us at [help@longevity-inc.com](mailto:help@longevity-inc.com).

## Specifications

<div>Models</div> <div>Parameters</div>	TigWeld 200EX			
Input power	1~220±10%， 50Hz			
Rated input current （A）	35.4 （TIG）		39.5 （STICK）	
Rated input power （KW）	5.2 （TIG）		6.4 （STICK）	
Power factor	0.68			
Max no-load voltage(V)	66			
Adjustment range of start current （A）	TIG		STICK	
	AC	DC	AC	DC
	10～welding current	5～welding current	——	——
Adjustment range of welding current （A）	10～200	5～200	10～170	5～170
Adjustment range of downslope time （S）	0～10			
Pre-gas time （S）	0.1~1			
Adjustment range of post-gas time （S）	0.1～10			
Clearance effect （%）	15～50			
Efficiency Duty cycle（40℃， 10 minutes）	AC		DC	
	25% 200A		25% 200A	
	60% 90A		60% 110A	
	100% 70A		100% 90A	
Protection class	IP23S			
Insulation class	F			
Dimensions of Machine （L×W×H）（mm）	470×250×400			
Weight(Kg)	20			

## Operation

### Layout for the panel

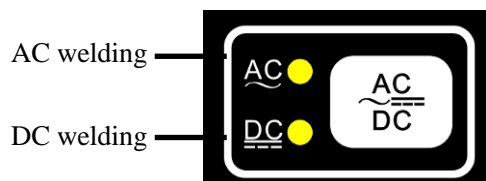


- 1 **Positive Welding Terminal:** Positive polarity output. It is important that the plug be inserted and secured.
- 2 **8 pin Control Socket:** Is used to connect either to the trigger switch on the TIG torch, or to the foot pedal
- 3 **Negative Welding Terminal:** Negative polarity output. It is important that the plug be inserted and secured.
- 4 **Shielding gas connector:** Is connected to the gas input pipe of torch.
- 5 **Power source switch:** Switch to “ON”, the welder is turned on, while switch to “OFF”, the welder is turned off.
- 6 **Power source input:** To connect to a 220v power source.
- 7 **Shield gas input joint:** Gas inlet for shielding gas
- 8 **Fan:** Is used for cooling the components and parts inside the welder.

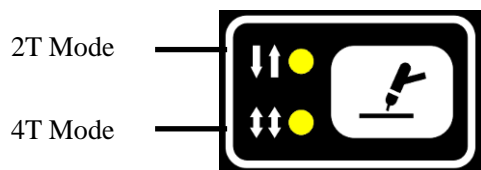


### Overview

#### (1) AC/DC Selection Button



#### (2) 2T/4T Selection Button



#### (3) Gas-test Button

Lights up when Gas-test key is selected, after that gas will flow out for 15 seconds. Press the button again to stop the gas flow before the 15 seconds are up.

#### (4) HF (high-frequency) ignition Button

Lights up when High frequency key is pressed, HF (high-frequency) ignition has been selected.

#### (5) Pulse Button

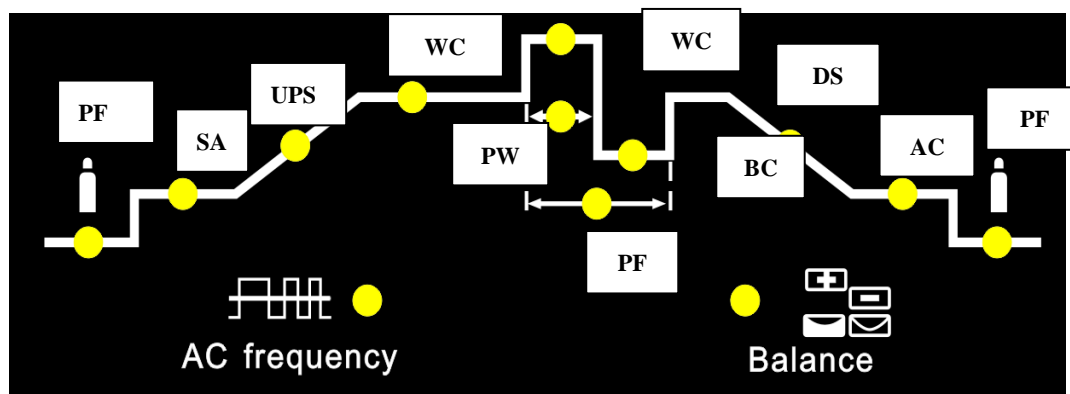
Lights up when Pulse key is pressed, Pulse has been selected.

#### (6) and (7) Parameter selection keys

If "2T/4T mode" has been selected, it is possible to change welding parameters by means of the parameter selection keys (6) and (7) while the welding operation is in progress.

## (8) Adjusting dial

If the parameter indicator lights up, then the selected parameter can be altered on adjusting dial.



Available parameters where 2T and 4T mode have been selected:

### PF Gas pre-flow time

Unit	Seconds
Setting range	0.1—1
Factory setting	0.3

### SA Starting current (only with 4T)

Unit	Amps
Setting range	5—100% of main current WC (DC); 10—100% of main current WC (A/C)
Factory setting	5

### UPS Upslope time

Unit	Seconds
Setting range	0—10
Factory setting	0

### WC Welding current

Unit	Amps
	5—200 (TIG-DC); 10—200 (TIG-AC); 5—170 (Stick-DC); 10—170 (Stick-AC)

### BC Base current

Unit	Amps
	5—200 (DC); 10—200 (AC)

**Important!** Only selectable when “pulse key” has been pressed.

### PW Pulse Width

Unit	%
Setting range	5—100
Factory setting	5

**Important!** Only selectable when “pulse key” has been pressed.

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## PF Pulse frequency

Unit	Hz
Setting range	0.5—200
Factory setting	0.5

**Important!** Only selectable when “pulse key” has been pressed.

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## DS Downslope time

Unit	Seconds
Setting range	0—10
Factory setting	0

---

## AC Arc current (only with 4T)

Unit	Seconds
Setting range	5—100% of main current WC (DC); 10—100% of main current WC (AC)
Factory setting	5

---

## PF Gas post-flow time

Unit	Seconds
Setting range	0.1—10
Factory setting	3

---

## AC frequency (only with TIG-AC)

Unit	Hz
Setting range	50—250 (WC<50A) 50—200 (50A≤WC<100A) 50—150 (100A≤WC<150A) 50—100 (150A≤WC<200A)

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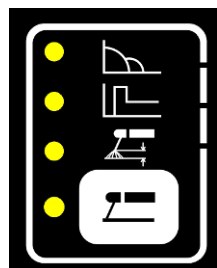
## Balance (only with TIG-AC)

Balance adjustment is mainly used to set the adjustment of eliminating metal-oxide (such as Aluminium, Magnesium and its alloy) while in AC output mode.

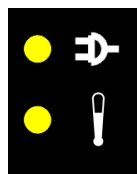
Unit	%
Setting range	15—50
Factory setting	15

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## (9) Rod electrode (Stick) welding key



Parameter	Setting range
Arc force	0-10
Hot start	0-10
Arc length	0-10

**(10) Power/Alarm indicator**

Power Indicator Light

Indicates if the welder reaches its duty cycle, or if the machine senses over-voltage or over-current. At the same time “Err 001.” will display on the LCD

Display





## TigWeld 200EX 200amp AC/DC TIG Welder

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LONGEVITY® Global, Inc. thanks you for your purchase and the opportunity to be able to serve you. If, after reviewing this manual, you have any problems in setting up or operating your machine, contact us at [help@longevity-inc.com](mailto:help@longevity-inc.com).

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For the coolest LONGEVITY sponsored race teams plus a complete racing forum that covers everything from Drag Racing to RC Car Racing, please check out [www.longevity-racing.com](http://www.longevity-racing.com)!

Enjoy your new welding machine from LONGEVITY! Thanks again!

